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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/660,503

09/12/2003

Terence Donald Deines

B301 0004

5655

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7590

12/02/2005

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EXAMINER

NGUYEN, DANNY

ART UNIT

PAPER NUMBER

2836

DATE MAILED: 12/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/660,503	<b>Applicant(s)</b> DEINES ET AL.	
	<b>Examiner</b> Danny Nguyen	<b>Art Unit</b> 2836	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 May 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### **Foreign application Priority**

1. The copies of the priority document have not been received. Applicant is requested to submit certified copies of the priority document.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In specification, paragraph 0016, applicant describes that "the precision gap can be replaced by a switch or triggered gap which is control by a controller" while claim 14 recites the precision gap comprises a triggered gap which is controlled by a control circuit. This claimed feature is not clear. Furthermore, "said gap" is claimed in the last line of claim 14 is not clear.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3, 6-8, 11, 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato (USPN 5,289,335) in view of Zahlmann et al (USPN 6,788,519).

Regarding claims 1, 7, 8, 14 Kato discloses a lightning arrester circuit (figures 3 and 7) comprises two conductors (26', 27'), a precision gap (gap 28) between the two conductors, and connected in parallel with the precision gap a surge arrester (31) and a resistor (52) in series (col. 7, lines 48-60). Kato does not teach an insulated gap between the conductors a control circuit as claimed. Zahlmann discloses an over-voltage protection circuit (figures 1 and 9) comprises an insulating gap (e.g. insulating layer 18 is disposed between two electrodes 1 and 2) is disposed between two conductors (1 and 2), and a control circuit (triggering device in figure 1) triggers a breakdown of the gap (F2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the conductors of Kato to incorporate the insulating layer which is disposed between the two conductors and control circuit as disclosed by Zahlmann so that the spark-over voltage between the electrodes is kept constant over operating periods.

Regarding claims 2, 3, Kato discloses the precision gap comprises a gas discharge tube arrester (col. 8, lines 43-45).

Regarding claim 6, Kato discloses the surge arrester is MOV (varistor 31).

Regarding claim 11, Kato discloses the resistor (52) is linear resistor.

4. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato in view of Zahlmann et al, and E.F.W. Beck et al (USPN 2,473,850). The combination of Kato and Zahlmann disclose the gap arrester (28), but do not the breakdown voltage as claimed. However, providing the gap arrester has a breakdown

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voltage of approximately 3000 volts is well known in the art. Selecting the exact valued breakdown voltage of the gap arrester is based on the design constraints imposed by the system in which the arrester protection circuit is designed to be used. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected the breakdown voltage of the gap arrester of Kato and Zahlmann to incorporate the gap arrester having a breakdown voltage of approximately of 3000 volts because this is known breakdown voltage of gap arrester as taught by Beck (col. 8 lines 3-5).

5. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato in view of Zahlmann et al, and Oertel et al (USPN 5,500,782). The combination of Kato and Zahlmann disclose the surge arrester (31) and precision gap (28), but do not the rating voltage as claimed. However, providing the surge arrester has a rating voltage, which is below the rating voltage of precision arrester, is well known in the art. Selecting the rating voltage of the gap arrester and surge arrester is based on the design constraints imposed by the system in which the arrester protection circuit is designed to be used. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected the rating voltage of the surge arrester and the rating voltage of gap arrester of Kato and Zahlmann to incorporate a surge arrester having a rating voltage which is lower that a rating voltage of gap arrester because this is taught by Oertel (col. 1, lines 36-60).

6. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato in view of Zahlmann et al, and Winkelmann (USPN 5,621,602). The combination of Kato and Zahlmann disclose the resistor (52), but do not the resistor has a value as claimed. However, Selecting the value of the resistor is based on the design constraints imposed by the system in which the arrester protection circuit is designed to be used. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected the value of the resistor of Kato and Zahlmann to select the resistor having a value of 100 ohms as taught by Winkelmann (col. 1, lines 51-53).

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Danny Nguyen whose telephone number is (571)-272-2054. The examiner can normally be reached on Mon to Fri 8:00 AM to 4:30 PM.

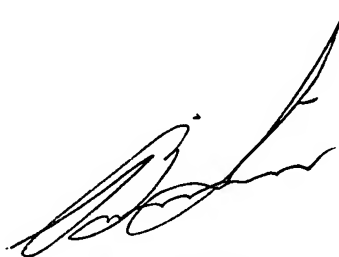
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (571)-272-2058. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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11/25/2005



**BRIAN SIRCUS**  
**SUPERVISORY PATENT EXAMINER**  
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